

far as I recollect, however, no case of this sort is known in the order; and the only instance I recall in which the dichogamy is incomplete enough to allow self-fertilization is afforded by the genus *Hydrocotyle*, described by Herman Muller (Weitere Beobachtungen, 1879, I. p. 32-33.). Even here there is very pronounced protandry, for the stigmas do not become receptive until the last stamen has matured; and the accelerated development of the pistil is doubtless correlated with the reduced flowers and umbels of this aberrant genus, and the attendant decrease in the number of its insect visitors. The causes which led to this reduction in the attractiveness of the flowers are probably of an entirely different nature, and connected with the changed habit of the plants. In Germany the flowers of the parsnip are said by Dr. Muller to be visited by Hymenoptera and Diptera, never by Coleoptera!—WM. TRELEASE, Cambridge, Mass.

**Seeds of *Orontium* and *Symplocarpus*.**—Has any Botanist of U. S. got ripe seeds of *Orontium* and of *Symplocarpus*, and will they forward some by mail to Sir J. D. Hooker, Royal Gardens, Kew, London? No matter how old; they are wanted for the structure.—A. G.

**The Greenland Flora.**—A year hence the classical *Flora Danica* will be terminated by the completion of the seventeenth volume. The work will contain figures of 4,000 species of plants, of Scandinavia, including Greenland and Iceland. It has been published wholly at the expense of the King of Denmark, and a right royal work indeed. At its completion the plates (in folio) which relate to Greenland plants, and which illustrate its whole flora, are to be separately issued, with a brief letter press, under the title of *Icones Floræ Groenlandicæ*. As this flora is in one sense American, and as the copies of the whole *Flora Danica* in the United States are and must be very few, we take pleasure in announcing this illustrated Greenland Flora to American botanists. Some of them will wish to possess it. The price of uncolored copies is fixed at 56 francs, of the colored at 236 francs. It should be added that, as the impression is strictly limited, application should be made very promptly. The editor, Professor Joh. Lange, Copenhagen, informs us that he will himself receive subscriptions, up to the first of May next.—A. G.

**A Note from Emesby.**—EDITOR OF THE BOTANICAL GAZETTE.—Let me thank Professor Rothrock most heartily for his courteous statement—or rather re-statement—of the methods and “trend” of botany teaching in the University of Pennsylvania; after which I ought not to have another word to say further than to disclaim all thought or intention of “criticising” the articles which appear

ed in the GAZETTE from the pen of this genial writer; articles which no one could have read with more cordial appreciation than I. The truth is, I was away from home, and dropping into a public reading room to spend a leisure hour, I picked up a periodical which, for all the botany it contains, I have not considered worth subscribing for, and the whole spirit of the little I did read on this occasion prompted my hasty and inconsiderate protest. Had I waited for the next number of the GAZETTE, giving Prof. Beal's methods and the editorial comments thereon I would have felt reassured and remained in becoming obscurity.

I wrote in the interest of the "average amateur"—being of that "small fry" myself. I had no right—indeed am utterly incompetent—to write in the interest of the average Professor seeking to advance the cause of Science and at the same time his individual reputation "in the direction of least resistance" by working in fields that have only been left unexplored because they are comparatively uninviting.

But I must have said something very naughty to stir up the Botanical editor of the *Naturalist* to a notice covering just nine lines, but so crowded with apparently unconscious perversions, misquotations, and unwarranted inferences that I stand amazed! I am charged with placing too high a value on the "identification of a few plants (when I distinctly urged the very reverse) or the "finding of a new species"—when I never said a word about new species, and in point of fact consider "new species" a chance game, the "finding" of which may just as well fall to the lot of a fool as a philosopher. The eliminating of Mr. Watson's species to which I incidentally referred, directly resulting from a thorough revision of the genera to which they respectively belong, is quite another matter.

What I did say is this: that a large proportion "of amateurs are interested" in plants themselves, in their structural affinities as expressed in a methodical arrangement "which involves organography—comparative morphology—and systematic botany" and "in their geographical distribution and antecedents." Under this last head may I quote from an address given by Charles Kingsley to the Scientific Society of Winchester. He says: "I ask you to consider for a time, a subject which is growing more and more important and interesting, a subject the study of which will do much toward raising the field naturalist from a mere collector of specimens—as he was twenty years ago—to a philosopher elucidating some of the grandest problems. I mean the infant science which treats of the distribution of plants and animals over the globe and the causes of that distribution." "It begins with asking every plant or animal you meet, large or small, not merely what is your name? That is the collector and classifier's duty, and a most necessary duty it is, and one to be performed with the most conscientious patience and accuracy so that a sound foundation may be built for future specu-

lations. But \* \* \* how did you get here? By what road did you come? What was your last place of abode?" And better still, Wallace in "Island Life," p. 6: "If we take the organic productions of \* \* \* any very limited tract of country, such as a moderate country parish, we have, in their relations and affinities—in the fact that they are *there* and others are *not* there, a problem which involves all the migrations of these species and their ancestral forms—all the vicissitudes of climate and all the changes of sea and land which have affected those migrations—the whole series of actions and reactions which have determined the preservation of some forms and the extinction of others—in fact, the whole history of the earth, organic and inorganic, throughout a large portion of time." And further on he says: "We require then in the first place an adequate knowledge of the fauna and flora of the whole world and even a detailed knowledge of many parts of it." \* \* \* "This kind of knowledge is of very slow growth and is still very imperfect. In the next place we require a true and natural classification of animals and plants so that we may know their real affinities and it is only now that this is being generally arrived at." Here certainly, is "ample room and verge enough" for the exercise of all the mental power the "average amateur" is possessed of—not to include the average Professor as well.

I distinctly disclaimed any intention to disparage histological studies, but nevertheless would protest against the thrusting of histology upon students as a first step in the acquisition of a knowledge of systematic botany. Need I do more in this connection, now, than to remind the reader of the programme of a summer school, not long since, and place beside it this quotation from the preface to the last edition of Gray's Text Book: "Structural and Morphological Botany of Phaenogamous Plants properly *comes first*. It should thoroughly equip a botanist for the scientific prosecution of Systematic Botany, and furnish needful preparation to those who proceed to the study of Vegetable Physiology and Anatomy!"

But I don't "understand plants as living things." That depends! I strive to the extent of my ability to study my fellow-men as "living things;" but I much prefer to go to the Herbert Spencer's Sociology for instruction to dissecting a cadaver under the best demonstrator of human anatomy in the country. It is a question of predilection as I said before—and I for one do not propose to quietly submit to the claims of the anatomists that they are the only students of "living things."

Is the little tufted, alpine *Diapensia* which we find on the summit of Mount Washington, with all the fascinating associations which cluster around it as a relic of the glacial period, more or less a living thing than a pickled pumpkin vine?

As to the advantage of the study of botany on account of the

comprehensiveness and perfection of its classifications let me offer the following from Prof. Youmans: "No other subjects compare with zoology and botany in these respects. Not only do they furnish inexhaustible material for the exercise of memory, but by the presentation of facts in their natural relations, they exercise it in its highest and most perfect form." \* \* \* "They open to us the broadest view of the relations and harmonies of organic nature, and are best fitted to discipline the mind in dealing with large co-ordinations, and the comprehensive arrangement of objects of thought, whether in the arts, the professions, business or science."

I have quoted freely the words of eminent men, hoping thereby to encourage young botanists to hold bravely to their preferences, who might have treated any argument advanced by myself as not worthy of consideration.—EMESBY.

**American Grape Mildew in Europe.**—The fact that our common grape mildew, *Peronospora viticola* B. & C. grows luxuriantly on cultivated varieties of *Vitis vinifera* in this country was noticed in the Bulletin of the Bussey Institution of March, 1876, and although owing to the dryness and short duration of our summers it was there stated that no great harm need be anticipated to the grape crop in the northeastern States, it was suggested that the case might be very different should the fungus be introduced into the vineyards of Central and Southern Europe, where the climatic conditions are very different from ours. In 1877 Dr. Cornu called attention, in the Comptes Rendus, to the danger of the introduction of the *Peronospora* into France by the importation of American vines; and, as is well known, his fears were soon realized. In 1878 the mildew was detected by Planchon in the southwest of France, and in the following year by Therry in the vicinity of Lyons, by Pirota in Northern Italy, and in Switzerland. Since then the spread of the disease has been rapid and it has attacked the vineyards in the greater part of France and Italy and has extended as far eastward as Hungary and as far southward as Algiers.

As was natural, great alarm was excited by the appearance of the fungus in wine growing districts, and the agricultural journals of France and Italy especially have contained numerous articles on the disastrous effect of the mildew and the means of prevention. With reference to the injurious effect on the wine crop opinions vary considerably; some maintaining that the *Peronospora* is even more harmful to the vine than the *Phylloxera*, while others declare that the injury done is not great. Official investigations have been undertaken in Italy and France for the purpose of ascertaining the best way of combatting the disease.

The latest contribution on the subject is the Report of Prof. Prillieux in the Journal Officiel, Jan. 9th, 1882, who was appointed to study the mildew and its development in the vineyards of France